

WHAT IS CLAIMED IS:

1. A ceramic shell comprising:

an upper portion having a first side portion and a second side portion, the first side portion of the upper portion extending forward and including at least one curved surface, the second side portion of the upper portion also extending forward and including at least one curved surface, wherein the first side portion of the upper portion, the upper portion, and the second side portion of the upper portion being formed of a monolithic piece of ceramic material;

a curved portion being connected to the upper portion at an upper end of the curved portion; and

a seat portion being connected to the curved portion at a lower end of the curved portion.

2. The ceramic shell of claim 1, further comprising a forward interior surface, wherein the forward interior surface is configured to mate with a rearward surface of a composite bucket.

3. The ceramic shell of claim 1, wherein the curved portion includes a first side portion and a second side portion, the first side portion of the curved portion extending forward and including at least one curved surface and the second side portion of the curved portion also extending forward and including at least one curved surface, wherein the first side portion of the curved portion, the curved portion, and the second side portion of the curved portion being formed of a monolithic piece of ceramic material.

4. The ceramic shell of claim 1, wherein the upper portion and the curved portion are formed of a monolithic piece of ceramic material.
5. The ceramic shell of claim 1, wherein the upper portion and the curved portion share at least one continuous surface.
6. The ceramic shell of claim 1, wherein the seat portion includes a first side portion and a second side portion, the first side portion of the seat portion extending forward and including at least one curved surface and the second side portion of the seat portion also extending forward and including at least one curved surface, wherein the first side portion of the seat portion, the seat portion, and the second side portion of the seat portion being formed of a monolithic piece of ceramic material.
7. The ceramic shell of claim 1, wherein the upper portion and the seat portion are formed of a monolithic piece of ceramic material.
8. The ceramic shell of claim 1, wherein the upper portion and the seat portion share at least one continuous surface.
9. The ceramic shell of claim 1, wherein the seat portion and the curved portion are formed of a monolithic piece of ceramic material.
10. The ceramic shell of claim 1, wherein the seat portion and the curved portion share at least one continuous surface.

11. The ceramic shell of claim 1, wherein the seat portion, the curved portion, and the upper portion are all formed of a monolithic piece of ceramic material.
12. The ceramic shell of claim 1, further comprising at least one cut-out.
13. The ceramic shell of claim 11, wherein the cut-out is pre-formed in the ceramic shell.
14. The ceramic shell of claim 1, wherein at least one portion of the ceramic shell includes at least one groove.
15. The ceramic shell of claim 14, wherein the groove defines at least one enclosed area.
16. An armor device comprising:
 - a composite bucket having a rearward surface; and
 - a ceramic shell having a forward interior surface, the forward interior surface is configured to mate with the rearward surface of the composite bucket,
 - wherein the ceramic shell includes two or more of an upper portion, a curved portion, and a seat portion, the two or more of the upper portion, the curved portion, and the seat portion of the ceramic shell being formed of a monolithic piece of ceramic material,
 - wherein each of the upper portion, the curved portion, and the seat portion comprises at least one of a first side portion and a second side portion, the at least one of the first side portion and the second side portion extending forward and including at least one curved surface.

17. The device of claim 16, wherein the composite bucket is constructed as layers of material laid upon the forward interior surface of the ceramic shell.
18. The device of claim 16, wherein the upper portion and the curved portion are joined together.
19. The device of claim 16, wherein the upper portion and the curved portion share at least one substantially continuous surface.
20. The device of claim 16, wherein the seat portion and the curved portion are joined together.
21. The device of claim 16, wherein the seat portion and the curved portion share at least one substantially continuous surface.
22. The device of claim 16, wherein the seat portion and the upper portion are joined together.
23. The device of claim 16, wherein the seat portion and the upper portion share at least one substantially continuous surface.
24. A monolithic ceramic shell comprising:
 - an upper portion having a lower end;
 - a curved portion monolithically connected to the lower end of the upper portion,
 - the curved portion having a lower end; and

and a seat portion monolithically connected to the lower end of the curved portion,

wherein the upper portion, the curved portion, and the seat portion are all formed of a monolithic piece of ceramic material.

25. The monolithic ceramic shell of claim 24, wherein the upper portion includes at least one side portion, the at least one side portion of the upper portion extending forward and including at least one curved surface, and wherein the at least one side portion of the upper portion and the upper portion being formed of a monolithic piece of ceramic material.

26. The monolithic ceramic shell of claim 24, wherein the curved portion includes at least one side portion, the at least one side portion of the curved portion extending forward and including at least one curved surface, and wherein the at least one side portion of the curved portion and the curved portion being formed of a monolithic piece of ceramic material.

27. The monolithic ceramic shell of claim 24, wherein the seat portion includes at least one side portion, the at least one side portion of the seat portion extending forward and including at least one curved surface, and wherein the at least one side portion of the seat portion and the seat portion being formed of a monolithic piece of ceramic material.

28. An armor system comprising:

a ceramic shell having an upper portion, a seat portion, and a forward interior surface; and

a composite bucket disposed adjacent to a substantial portion of the forward interior surface of the ceramic shell.

29. The system of claim 28, wherein the composite bucket includes a rearward surface and the rearward surface of the composite bucket mates with the forward interior surface of the ceramic shell.

30. The system of claim 28, wherein the composite bucket is constructed as layers of material laid upon the forward interior surface of the ceramic shell.

31. The system of claim 28, wherein at least one portion of the ceramic shell includes at least one groove.

32. The system of claim 31, wherein the at least one groove defines at least one enclosed area.

33. The system of claim 28, wherein the ceramic shell includes at least one cut-out.

34. The system of claim 33, wherein the at least one cut-out is pre-formed in the ceramic shell.

35. The system of claim 33, wherein the composite bucket is configured to receive at least one mechanical connector at the at least one cut-out.

36. The system of claim 28, wherein the ceramic shell further comprising a curved portion located between the upper portion and the seat portion.

37. A ceramic shell comprising two or more of an upper portion, a curved portion, and a seat portion, wherein at least one of the upper portion, the curved portion, and the seat portion comprises at least one of a first side portion and a second side portion, wherein the at least one of the first side portion and the second side portion extends forward and includes at least one curved surface, wherein the at least one of the first side portion and the second side portion is monolithically connected to at least one of the upper portion, the curved portion, and the seat portion.